

**What is claimed is:**

1           1. A computerized method for authenticating an electronic transaction between a  
2 user and a computer, the computer being configured to conduct electronic transactions, the  
3 method comprising:

4           receiving a computer-generated transaction identifier from the computer via an  
5 electronic data link;

6           receiving a user-spoken transaction identifier and a user-spoken verification  
7 identifier transmitted by the user via a voice connection;

8           comparing the user-spoken transaction identifier with the computer transaction  
9 identifier;

10          comparing the user-spoken verification identifier with a voice print of the user; and

11          transmitting an authentication message to the computer if the user-spoken transaction  
12 identifier matches the computer-generated transaction identifier and if the user-spoken  
13 verification identifier matches the voice print.

1           2. The method of claim 1, wherein the computer transaction identifier is generated  
2 by the computer in response to the electronic transaction conducted between the user and the  
3 computer.

1           3. The method of claim 1, further comprising the step of providing the user voice  
2 print and user payment information prior to the electronic transaction.

1 4. The method of claim 3, wherein the user voice print is provided by the user by  
2 providing a spoken telephone number to a voice recognition unit.

1 5. The method of claim 3, wherein the user voice print is provided by the user by  
2 providing a spoken user name to a voice recognition unit.

1 6. The method of claim 3, wherein the user payment information includes a credit  
2 card number and an associated credit card expiration date.

1 7. The method of claim 1, wherein the step of receiving a user-spoken transaction  
2 identifier and the step of receiving a user-spoken verification identifier must be performed  
3 within a predetermined time from completing the electronic transaction.

1 8. The method of claim 7, wherein the predetermined time is about five minutes.

1 9. The method of claim 1, wherein the electronic data link includes the Internet.

1 10. The method of claim 1, wherein the electronic data link includes a private  
2 network.

1 11. The method of claim 1, wherein the computer is a system component of a  
2 financial institution.

1 12. The method of claim 11, wherein the financial institution is a bank.

1 13. The method of claim 12, wherein the user conducts the electronic transaction  
2 using an ATM machine.

1 14. The method of claim 12, wherein the user conducts the electronic transaction by  
2 communicating with a bank teller.

1 15. The method of claim 1, wherein the user conducts the electronic transaction  
2 using a personal computer.

1 16. The method of claim 1, wherein the user conducts the electronic transaction  
2 using a wireless device.

1 17. The method of claim 1, wherein the user conducts the electronic transaction  
2 using a hand-held device.

1 18. The method of claim 1, wherein the computer is a system component of an  
2 Internet web-site.

1 19. The method of claim 18, further comprising:  
2 receiving at least one user-spoken command for controlling web-site navigation, the  
3 at least one user-spoken command being transmitted by the user via a telephonic voice

4 connection;  
5 converting the at least one user-spoken command into at least one computer-readable  
6 command;  
7 transmitting the at least one computer readable command to the computer; and  
8 executing the at least one computer readable command, using the computer, whereby  
9 the user controls web-site navigation of the Internet web-site by voice command via the  
10 telephonic voice connection.

1 20. The method of claim 19, wherein the user is prompted by a voice menu system  
2 to respond to voice menu options when transmitting the at least one user-spoken command.

1 21. The method of claim 1, further comprising:  
2 providing at least one voice menu option to the user;  
3 processing at least one user-spoken response to the at least one voice menu option, whereby  
4 the at least one user-spoken response is transformed into at least one computer-readable  
5 response;  
6 transmitting the at least one computer-readable response to the computer; and  
7 executing the at least one computer response, using the computer, whereby the user  
8 controls the computer by voice command.

1 22. The method of claim 1, wherein the user-spoken transaction identifier and the  
2 user-spoken verification identifier are transmitted by a telephonic voice connection.

1           23. The method of claim 1, wherein the electronic transaction includes an on-line  
2 purchase of goods or services.

1           24. The method of claim 1, wherein the electronic transaction includes a banking  
2 transaction.

1           25. The method of claim 1, wherein the electronic transaction includes downloading  
2 music files.

1           26. The method of claim 1, wherein the electronic transaction includes a  
2 point-of-sale transaction.

1           / 27. A system for authenticating an electronic transaction between a first  
2 user-operated device and a computer, the computer being configured to conduct electronic  
3 transactions, the system comprising:

4           a voice browser configured to receive and process user-spoken information when  
5 coupled to a second user-operated device, the voice browser being programmed to compare  
6 a user-spoken transaction identifier to a computer-generated transaction identifier, and to  
7 compare a user-spoken verification identifier to a voice print of the user; and

8           a session correlator coupled to the voice browser, the session correlator being  
9 configured to transmit an authentication message to the computer if the user-spoken  
10 transaction identifier matches the computer transaction identifier, and if the user-spoken  
11 verification identifier matches the voice print.

1           28. The system of claim 27, wherein the voice browser further comprises:  
2           a voice recognition unit coupled to the second user-operated device via a network,  
3           the voice recognition unit being configured to recognize audible tones transmitted over the  
4           network; and  
5           a database coupled to the voice recognition unit, the database being configured to  
6           store the voice print of the user and payment information associated with the voice print.

1           29. The system of claim 28, wherein the voice recognition unit recognizes both  
2           spoken input and DTMF input.

1           30. The system of claim 28, further comprising a telephony interface unit coupled to  
2           the voice recognition unit, the telephony interface unit being configured to convert signals  
3           carried by the network into signals having a correct format and amplitude.

1           31. The system of claim 27, wherein the voice browser further comprises a voice  
2           menu system, the voice menu system comprising:  
3           a voice menu option library having stored therein at least one voice menu option;  
4           a user interface transmitter configured to transmit the at least one voice menu option  
5           to the user, the user interface transmitter including a synthesized speech unit for generating  
6           the at least one voice menu option, and a digitized audio unit for generating user-audible  
7           signaling tones; and  
8           a user interface receiver configured to recognize a plurality of user-spoken menu

9 selections provided by the user in response to the at least one voice menu option.

1 32. The system of claim 27, wherein the voice browser includes a digital signal  
2 processor.

1 33. The system of claim 27, wherein the voice browser includes at least one software  
2 module resident in an Internet backbone.

1 34. The system of claim 27, wherein the voice browser includes at least one software  
2 module resident in a telecommunications switch.

1 35. The system of claim 27, wherein the voice browser includes at least one software  
2 module resident in a computer disposed in a network data center.

1 36. The system of claim 27, wherein the voice browser includes at least one software  
2 module resident in a computer disposed in a customer premise equipment.

1 37. The system of claim 27, wherein the voice browser includes at least one software  
2 module resident in a computer disposed in an intranet.

1 38. The system of claim 27, wherein the session correlator includes at least one  
2 software module resident in an Internet backbone.

1 39. The system of claim 27, wherein the session correlator includes at least one  
2 software module resident in a telecommunications switch.

1 40. The system of claim 27, wherein the session correlator includes at least one  
2 software module resident in a computer disposed in a network data center.

1 41. The system of claim 27, wherein the session correlator includes at least one  
2 software module resident in a computer disposed in a customer premise equipment.

1 42. The system of claim 27, wherein the session correlator includes at least one  
2 software module resident in a computer disposed in an intranet.

1 43. The system of claim 27, wherein the second user-operated device includes a  
2 microphone.

1 44. The system of claim 27, wherein the second user-operated device includes a  
2 telephone set.

1 45. The system of claim 44, wherein the telephone set is a wireless telephone.

1 46. The system of claim 45, wherein the wireless telephone is configured to use a  
2 wireless access protocol.



1 47. The system of claim 27, wherein the computer transaction identifier is generated  
2 by the computer in response to the electronic transaction conducted between the user and the  
3 computer.

1 48. The system of claim 27, wherein the electronic data link includes the Internet.

1 49. The system of claim 27, wherein the electronic data link includes a private  
2 network.

1 50. The system of claim 27, wherein the computer is a system component of a  
2 financial institution.

1 51. The system of claim 50, wherein the financial institution is a bank.

1 52. The system of claim 51, wherein the first user-operated device includes an ATM  
2 machine.

1 53. The system of claim 51, wherein the user conducts the electronic transaction by  
2 communicating with a bank teller.

1 54. The system of claim 27, wherein the first user-operated device includes a  
2 personal computer.

1           55. The system of claim 27, wherein the first user-operated device includes a  
2 wireless device.

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4           56. The system of claim 27, wherein the first user-operated device includes a  
5 hand-held device.

1           57. The system of claim 27, wherein the computer is a system component of an  
2 Internet web-site.

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1           58. The system of claim 27, further comprising:  
2           a user authentication input unit coupled to the first user-operated device and the  
3 session correlator, the user authentication unit being configured to accept a user name and a  
4 user password from the user;  
5           a database coupled to the user authentication input unit, the database being  
6 configured to store an authentic user name and an authentic user password; and  
7           a user authenticator coupled to the user authentication input unit, the database, and  
8 the session correlator, the user authenticator being programmed to compare the user name to  
9 the authentic user name, and to compare the user password to the authentic user password,  
10 whereby the user authenticator provides the session correlator with a transaction denial  
11 message if the user name does not match the authentic user name, or the user password does  
12 not match the authentic user password.

1           59. The system of claim 27, wherein the electronic transaction includes an on-line  
2 purchase of goods or services.

1           60. The system of claim 27, wherein the electronic transaction includes a banking  
2 transaction.

1           61. The system of claim 27, wherein the electronic transaction includes downloading  
2 music files.

1           62. The system of claim 27, wherein the electronic transaction includes a  
2 point-of-sale transaction.

1           / 63. A computerized voice verification method for authenticating an electronic  
2 transaction between a user and a computer, the computer being configured to conduct  
3 electronic transactions, the method comprising:  
4           enrolling the user in a voice verification system, whereby the user provides the  
5 system with a user voice print;  
6           performing the electronic transaction;  
7           receiving a transaction identifier from the computer via an electronic data link in  
8 response to performing the electronic transaction;  
9           receiving a user-spoken transaction identifier and a user-spoken verification  
10 identifier transmitted by the user via a voice connection;  
11           comparing the user-spoken transaction identifier with the computer transaction

12 identifier and the user-spoken verification identifier with a voice print of the user; and  
13 transmitting an authentication message to the computer if the user-spoken transaction  
14 identifier matches the computer transaction identifier, and if the user-spoken verification  
15 identifier matches the voice print.

1 64. The method of claim 63, wherein a transaction denied message is transmitted to  
2 the computer if the user-spoken transaction identifier does not match the computer  
3 transaction identifier, or if the user-spoken verification identifier does not match the voice  
4 print.

1 65. A computerized method for controlling web-site navigation, the method  
2 comprising:  
3 providing an authentication system including a voice recognition unit and a session  
4 correlator, the voice recognition unit having access to a pre-registered voice print of the user,  
5 whereby the authentication system is coupled to a user computer and a web-site during the  
6 computerized method;

7 conducting a transaction between the user computer and the web-site, the web-site  
8 transmitting a transaction identifier to the user computer and the authentication system in  
9 response to the transaction;

10 receiving a user-spoken transaction identifier and a user-spoken verification  
11 identifier via a telephonic connection, the authentication system being programmed to  
12 compare the user-spoken transaction identifier to the transaction identifier and the  
13 user-spoken verification identifier to the pre-registered voice print;

14 transmitting an authentication message to the web-site if the user-spoken transaction  
15 identifier matches the transaction identifier and if the user-spoken verification identifier

16 matches the voice print;  
17 receiving at least one user-spoken command for controlling web-site navigation, the  
18 authentication system being programmed to convert the at least one user-spoken command  
19 into at least one computer-readable command; and  
20 transmitting the at least one computer readable command to the web-site, the at least  
21 one computer readable command being executed by the web-site, whereby the user controls  
22 web-site navigation of the web-site by the at least one user-spoken command.

1 66. The method of claim 65, wherein the at least one user-spoken command includes  
2 a plurality of user-spoken commands.

1 67. The method of claim 65, wherein the plurality of user-spoken commands are  
2 transmitted by the user in response to a plurality of voice menu options provided by the  
3 authentication unit.

1 68. The method of claim 65, wherein a web-navigation is denied message is  
2 transmitted to the computer if the user-spoken transaction identifier does not match the  
3 computer transaction identifier; or if the user-spoken verification identifier does not match  
4 the voice print.